

Application No.: 10/664,513

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Docket No.: 416272003700

**AMENDMENTS TO THE SPECIFICATION**

Please replace the Abstract with the following amended Abstract:

The present invention relates to biochemical methods for assessing metabolic fitness and/or aerobic demands of a living system. Specifically, the rate of synthesis and turnover of the molecular components of mitochondrial mass are used to determine the aerobic capacity and/or aerobic demand of tissues or living organisms. The direct measurement of metabolic fitness and/or aerobic demand by ~~this means~~ methods of this invention can be used as an index of the efficacy of an exercise training program or other therapeutic intervention; as a medical risk factor for predicting the risk of cardiovascular disease, diabetes, death or other health outcome; or as an aid to pharmaceutical companies for drug discovery in the area of metabolic fitness, deconditioning, and oxidative biology.

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